

and glue adhesion or a combination thereof to form a coaxially layered tubular parison;

- (b) heating the parison to a predetermined temperature; and
- (c) drawing the parison longitudinally and radially expanding same to biaxially orient the material of the tensile layer such that the expander member exhibits a burst strength greater than about seven atmospheres.

27. The method of claim 26 further comprising the step of bonding the expander to a tubular catheter exterior.

28. The method of claim 27 wherein the inner layer has a melting point below that of the outer layer and wherein the expander is bonded to the catheter by melt bonding.

29. The process of claim 26 wherein the tensile layer is selected from materials of the group consisting of high and medium melt temperature copolymers, high melt temperature polyesters, high melt temperature polyethers, medium melt temperature polyethers and medium melt temperature polyamides.

30. The method as in claim 26 wherein the material of the tensile layer is selected from the group consisting of ABS (acrylonitrile-butadiene-styrene), ABS/nylon, ABS/polyvinyl chloride (PVC), ABS/polycarbonate and combinations thereof, acrylonitrile copolymer, polyacrylamide, polyacrylate, polyacrylsulfone, polyethylene terephthalate (PET), polybutylene terephthalate (PBT), polyethylene naphthalate (PEN), liquid crystal polymer (LCP), polyester/polycaprolactone polyester/polyadipate, polyetheretherketone (PEEK), polyethersulfone (PES), polyetherimide

(PEI), polyetherketone (PEK), polymethylpentene, polyphenylene ether, polyphenylene sulfide, styrene acrylonitrile (SAN), nylon 6, nylon 6/6, nylon 6/66, nylon 6/9, nylon 6/10, nylon 6/12, nylon 11 and nylon 12, and the polymeric material of the bonding layer is selected from the class consisting of ethylene propylene, ethylene vinylacetate and ethylene vinyl alcohol (EVA), various ionomers, polyethylene type I-IV, polyolefins, polyurethane, polyvinyl chloride, and polysiloxanes (silicones).

31. The method of claim 26 wherein the inner bonding layer consists of a material selected from the group consisting of ethylene propylene, ethylene vinylacetate, vinylacetate and ethylene vinyl alcohol (EVA), various ionomers, polyethylene type I-IV, polyolefins, polyurethane, polyvinyl chloride, and polysiloxanes (silicones).

32. A process for forming a multi-layer expander member for attachment to an intravascular catheter body tube comprising the steps of:

- (a) co-extruding an outer tensile layer consisting essentially of a biaxially-oriented polymeric film exhibiting high tensile strength and low distensibility, with an inner bonding layer consisting essentially of a polymeric plastic film adhered to the outer tensile layer, forming therewith a layer combination, the inner bonding layer further being one which adheres readily to a catheter body using a method selected from melt bonding

- and glue adhesion or a combination thereof to form a coaxially layered tubular parison;
- (b) heating the parison in a mold to a predetermined temperature;
  - (c) drawing the parison longitudinally and radially expanding same to biaxially orient the material of the tensile layer such that the expander member exhibits a burst strength greater than about seven atmospheres; and
  - (d) coating the outer surface of the tensile layer of the expander member with an hydrophilic lubricious plastic.

33. The method of claim 32 further comprising the step of bonding the expander to a tubular catheter exterior.

34. The method of claim 32 wherein the inner layer has a melting point below that of the outer layer and the expander is bonded to the catheter by melt bonding.

35. The process of claim 32 wherein the hydrophilic lubricious plastic is selected from the group consisting of polycaprolactam, polyvinylindol, vinyl pyrrolidone and hydrogels.

36. The process of claim 32 wherein the tensile layer is selected from materials of the group consisting of high and medium melt temperature copolymers, high melt temperature polyesters, high melt temperature polyethers, medium melt temperature polyethers and medium melt temperature polyanides.

37. The process of claim 32 wherein the material of the tensile layer is selected from materials of the group consisting of high and medium melt temperature copolymers, high melt temperature

polyesters, high melt temperature polyethers, medium melt temperature polyethers and medium melt temperature polyanides.

38. The method as in claim 32 wherein the material of the tensile layer is selected from the group consisting of ABS (acrylonitrile-butadiene-styrene), ABS/nylon, ABS/polyvinyl chloride (PVC), ABS/polycarbonate and combinations thereof, acrylonitrile copolymer, polyacrylamide, polyacrylate, polyacrylsulfone, polyethylene terephthalate (PET), polybutylene terephthalate (PBT), polyethylene naphthalate (PEN), liquid crystal polymer (LCP), polyester/polycaprolactone polyester/polyadipate, polyetheretherketone (PEEK), polyethersulfone (PES), polyetherimide (PEI), polyetherketone (PEK), polymethylpentene, polyphenylene ether, polyphenylene sulfide, styrene acrylonitrile (SAN), nylon 6, nylon 6/6, nylon 6/66, nylon 6/9, nylon 6/10, nylon 6/12, nylon 11 and nylon 12, and the polymeric material of the bonding layer is selected from the class consisting of ethylene propylene, ethylene vinylacetate and ethylene vinyl alcohol (EVA), various ionomers, polyethylene type I-IV, polyolefins, polyurethane, polyvinyl chloride, and polysiloxanes (silicones).

39. The method as in claim 35 wherein the material of the tensile layer is selected from the group consisting of ABS (acrylonitrile-butadiene-styrene), ABS/nylon, ABS/polyvinyl chloride (PVC), ABS/polycarbonate and combinations thereof, acrylonitrile copolymer, polyacrylamide, polyacrylate, polyacrylsulfone, polyethylene terephthalate (PET), polybutylene terephthalate (PBT), polyethylene naphthalate (PEN), liquid crystal